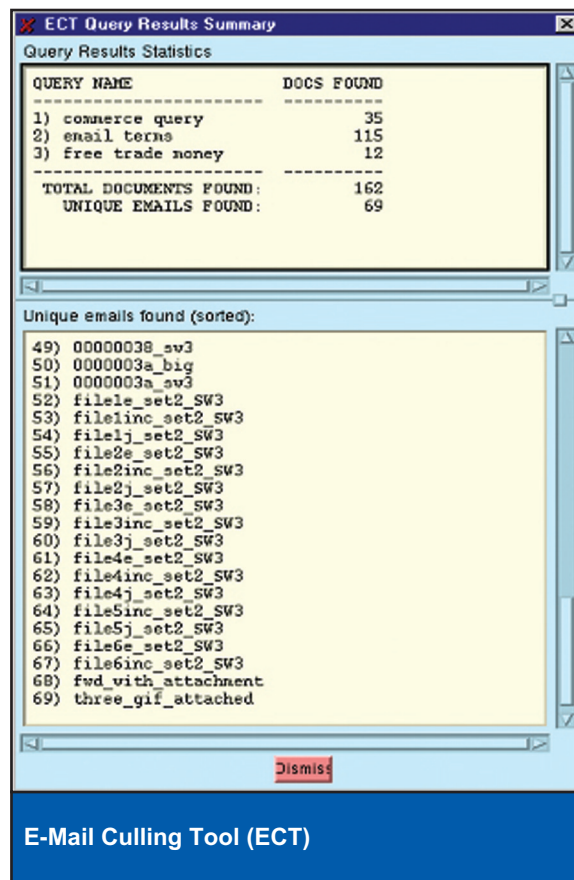# Air Force Research Laboratory | AFRL
Science and Technology for Tomorrow's Aerospace Forces

Success Story

AFRL ENHANCES PRECISION DOCUMENT RETRIEVAL AND ELECTRONIC MAIL SURVEILLANCE

E-Mail Culling Tool (ECT)

As military organizations continue to collect and store increasing amounts of textual documents electronically, users need automated tools to facilitate timely retrievals with precision. The Information Directorate, in collaboration with the National Air Intelligence Center (NAIC) at Wright-Patterson AFB, Ohio, developed the Document Content Analysis and Retrieval System (DCARS).

Accomplishment

DCARS permits users to retrieve text documents with increased speed and precision from the Central Information Reference and Control repository that stores millions of records in the gigabyte range of disk storage. DCARS uses a state-of-the-art search engine that includes several dictionaries and a thesaurus.

The directorate's Global Information Base Branch and NAIC developed tools to convert military thesaurus and acronym lists for easy integration into DCARS by adding a higher recall capability. Directorate engineers extended DCARS technology to the World Wide Web as WebDCARS.

DCARS/WebDCARS provides full text document search and retrieval along with natural language and Boolean searches. The directorate also developed the Electronic Mail Content Analysis and Retrieval System (EMCARS) to catch inadvertent and intentional release of sensitive information.

EMCARS is a unique capability that allows security officers to view e-mail attachments. It automates the electronic mail security-monitoring task, performs precision detection and flagging of suspect text messages, handles attachments and enhances rapid drill down, and limits viewing to suspect text messages.

Background

Over a period of several years, directorate engineers made a number of improvements to DCARS. They began parallel development on a web version (WebDCARS) while continuing to enhance the DCARS UNIX client/server version. Both versions became operational at NAIC in 2000 for classified and unclassified processing.

WebDCARS, now called WebPortal at NAIC, became the primary portal access point for customers to the various NAIC information holdings. Other DCARS and WebDCARS customers include the National Imagery & Mapping Agency, Sandia Laboratory, Joint Command and Control Warfare Center, Air Intelligence Command, and the 67th Operations Support Squadron at Kelly AFB, Texas.

Information
Technology Transfer

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTT, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (01-IF-06)